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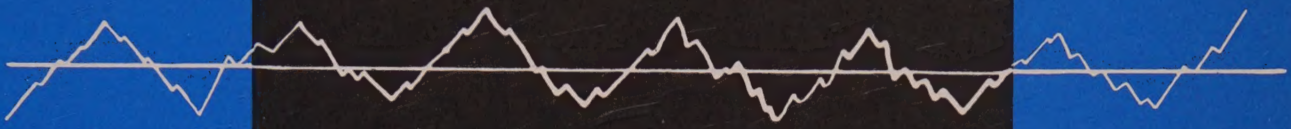

February 1960

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Director's Letter

Dear Member:

At their meeting on November 12th your Directors decided that we should spend two years conducting research; then I am to write a book!

The Book

The way in which I am going to fulfill this assignment is to rough draft a preliminary book in order to see better the gaps in our knowledge. Then I'll spend two years trying to fill those gaps. Then I'll try to write a *good* book.

I have already started. The job is going very nicely. Over 100 pages are already done.

We don't need any mock-up of a book to tell us *some* of the gaps in our knowledge. We are therefore already at work on several important projects. I'd like to tell you about them.

Study 11-Year Mass Excitement Cycles

First of all, we have under way an important study to confirm or deny Tchijevsky's theory that sunspots are associated with mass human excitability. When Tchijevsky wrote his paper (1924) there wasn't too much known about the dates of sunspot maxima in the early years. Now we have pretty good records, chiefly from old Chinese and Indian chronicles.

Basically, all we have to do is to compare Tchijevsky's dates of human disturbance with these now known dates of sunspot maxima to see if they do, or do not, tend to agree. Then, assuming the accuracy of Tchijevsky's historical dates and Shove's sunspot dates, we will be able to do one of two things: either we can blow Tchijevsky's theory sky high, or we can confirm it. Whichever way it comes out will be an important contribution to knowledge.

In any event, we'll be able to pin down more exactly the rhythms that periods of mass human excitement do have. This in itself will be an important forward step.

We may even find *two* rhythms in the mass excitement figures. One could conceivably tie to sunspots, another to something else. This would be comparable to killing two birds with one shot. Still, one can always hope!

Study Of The 11-Year Cycle In War

Another important project, also under way, is closely related. If there is an 11-year cycle in Tchijevsky's data—and there is (it's merely a matter of pinning it down)—there should be an 11-year cycle in Wheeler's war data. For what is war but mass human excitement? Moreover, you would expect the two cycles to agree. This then is the second main research project under way. We are studying Wheeler's Index of International Battles, his Index of Civil War Battles, and a new index combining the two, to see if an 11-year cycle is present and, if so, what its exact characteristics are. From this study we can see if the Wheeler Indexes do or do not show an 11-year cycle. (We know the International Battle Index does have an 11-year cycle back to 1750, but we don't know about the other indexes, nor about anything prior to 1750.) We can see if the 11-year cycle in Wheeler's data (if there is one) conforms to the 11-year cycle in Tchijevsky's data, and thus whether or not it is, or is not, related to the 11-year cycle in sunspots and/or in something else.

We hope to have the Tchijevsky study completed in time for the January *Journal of Cycle Research,* but the Wheeler study (which is three times as big a job) will probably not be published until later.

As soon as the work is done and conclusions reached you will be informed in *Cycles.*

Along with these two major research projects we have a number of minor jobs already in the works.

The Directory

For example, we have started to revise and bring up to date the Directory of cycle scientists that we published in 1941. This directory will help the scientists in each field to know the scientists doing cycle work in other fields. Also, it will give us the names of the people whose efforts we should try to integrate. (*The Journal of Cycle Research* will be made available to these people at some nominal price—probably $1.00 a year.)

The Subject Bibliography

Another little thing is a Subject Bibliography, (to be published in the *Journal of Cycle Research*) of all the material ever published by the Foundation. First, it will be handy to have this bibliography available for reference, but this is not the real reason for preparing or publishing it. The real reason is that most of the research we have done during the past 10 years or so has been published in *Cycles*. *Cycles* is not a scientific journal. A college library is not likely to take it. Even if it does, it is not likely to keep it. And even if it did, a scientist would not be likely to consult it! In sum, results published in *Cycles* are lost, scientifically speaking. By publishing in the *Journal* a bibliography of all the material we have published anywhere (including *Cycles*), we have our toe in the door of scientific literature. A scientist, consulting the *Journal of Cycle Research*, will find references to *Cycles*. He will at least be put on notice that this additional material exists. If he is interested he can then scare up a copy of *Cycles* somewhere and go on from there.

How To Make A Cycle Analysis

One other thing is under way: there is need for a simple manual of instructions on how to make a cycle analysis. The series of lessons (really a book) that I once wrote is all right for someone who wants to study the subject thoroughly, but it is too long (700-odd pages). What is needed is a simple short condensation written for the man who knows his way around in let us say adjusting for seasonal variation, but who is a little out of his depth when it comes to dealing with cycles of other than 12 months in length. Perhaps something about 40 or 50 pages long.

As part of the Basic Research Program I have something of the sort in process. When it is finished it will be published in the *Journal of Cycle Research,* perhaps filling an entire issue. There will be an announcement in *Cycles* to let you know about it, in case you want a copy.

Thanks To You

These things are not new. The important thing is that, as a result of the money you have contributed to the Basic Research Program, they are now under way.

Cordially yours,

Edward R. Dewey

Director

Errata

The last paragraph in the first column on page 10 of the January 1960 issue of *Cycles* should have read as follows:

A combination of these eleven cycles, together with underlying growth trend as determined from the figures 1871-1958 calls for a crest in 1957, a falling off in 1958 and 1959 (which has not occurred), a low in 1961, and an upward move to a crest in 1964 (the fulfillment of which we don't yet know about).

Sorry!

Research by Staff

THE PRICE OF SOYBEANS

BY G. SHIRK

In September 1959 the average monthly price of soybeans (at Illinois shipping points) dipped below $2.00 a bushel for the first time since World War II.

That a low should come in the autumn of the year is not surprising—the most obvious cycle fact to develop from our work with this series is that there is a seasonal pattern with a regular autumn low.

Figure 1 below gives the record of the average monthly price of soybeans beginning with 1947. Our work with the figures plotted below reveals three facts. Two of these facts are points of information in terms of cycle analysis.

First, there is a 12-month cycle in the price of soybeans; the date of the high of this seasonal pattern varies widely from year to year, but the timing of the low is fairly dependable.

Second, there does not appear to be any additional usable cycle readily discernible in the figures. There may well be cycles longer than 12 months, but the record here is so short that even if any longer cycles were immediately apparent, it would perhaps be dangerous to rely on them. There may also be shorter cycles—weekly figures would be required in order to see and isolate them.

We are left then with one usable cycle fact—the 12-month pattern with a reliable autumn low. (Of course, it is not news that an agricultural series would have a depressed price when the crop is in. Nevertheless, it is wise, if one is interested in soybean prices, to be definitive about the seasonal cycle—to have some idea of how much of a drop can be expected in the fall, and whether this has ever failed to happen, and just how varied the highs are.)

The third fact, which is apparent from a glance at the chart, is that the general overall direction of soybean price since 1947 has been downhill. This is not a cycle fact, but is nevertheless of interest to anyone concerned with soybean prices.

The broken line on the chart below is a 13-month average of the data; it has been smoothed somewhat to give an evenly rolling line which represents a moving yearly average centered at any point. It is impossible to know how this line will move into the future, but in order to give ourselves a benchmark to tie the seasonal pattern to, we have extended the broken line into 1960 at about $2.10.

The 12-month cycle we have isolated is based on the relationship between the average trend line on Figure 1 and the actual monthly price (also shown on the chart). This relationship, month by month, is shown graphically on the next page in Figure 2 by means of the solid line.

Figure 2 also shows the average 12-month cycle, or seasonal pattern, by means of the broken line. A comparison of the two lines on Figure 2 reveals that the actual seasonal low is much more likely

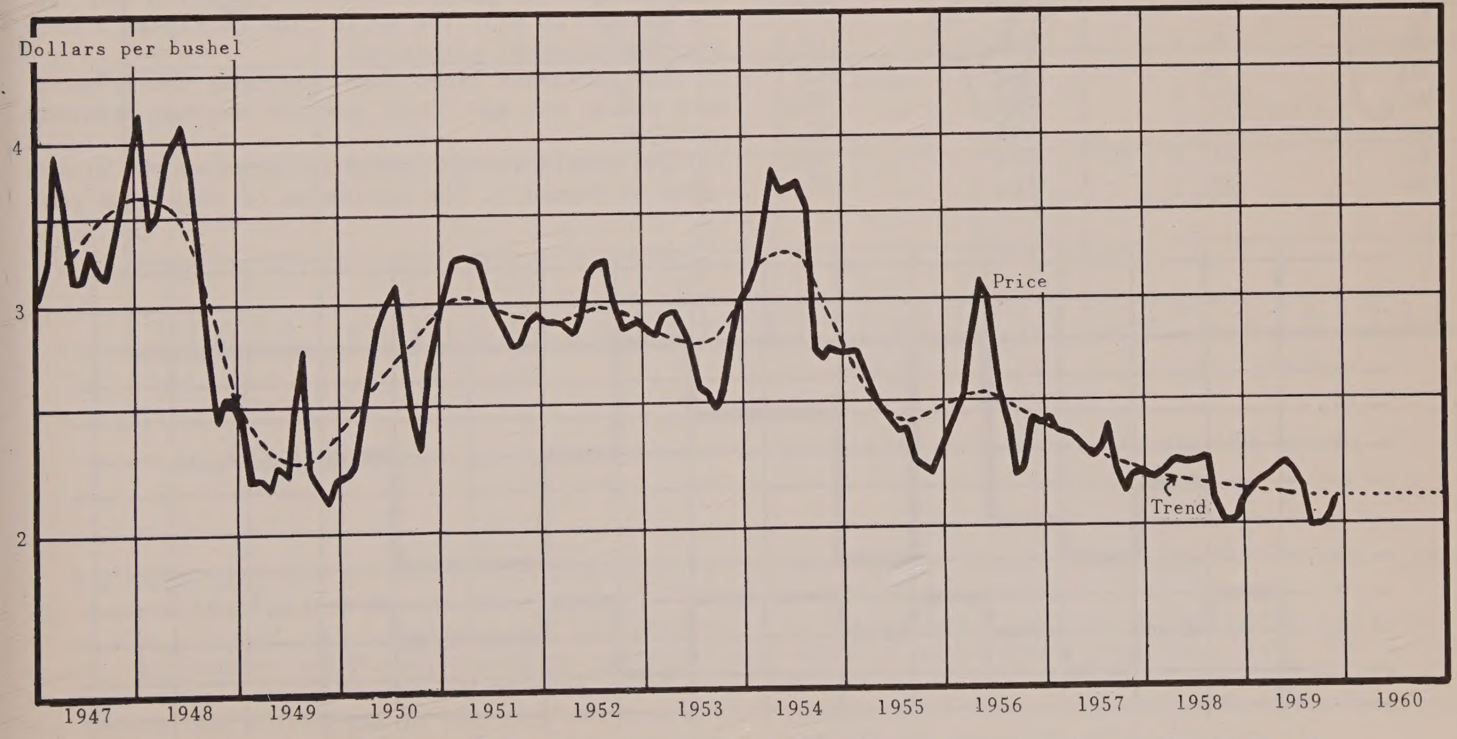

Fig. 1 The Price of Soybeans—Average Monthly Prices vs Smooth Yearly Trend

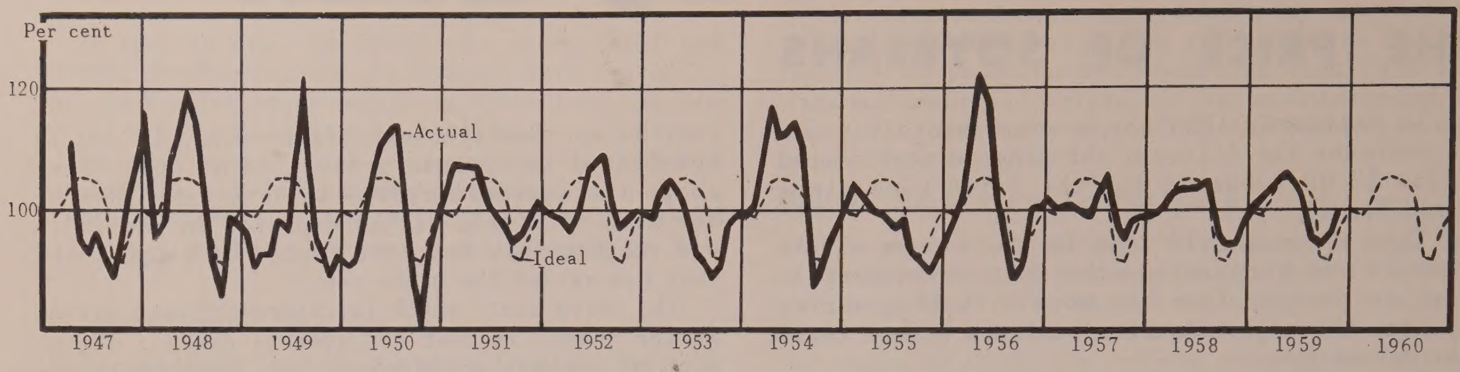

Fig. 2 Soybean Prices Seasonal Pattern—Actual vs Ideal Pattern

to match the average past experience than is the seasonal high.

Another chart which shows the degree to which the 12-month cycle is reliable is shown below. Figure 3 plots for each year just the months in which the yearly highs and lows occur. As is apparent, the month of high may vary from February to August, but the month of low comes September, October, or November. Of the 13 lows recorded on Figure 3, six have come in September, five in October, and two in November.

Although Figure 3 shows the individual months of high and low for each year, when all the months for all the years are averaged together, an average seasonal pattern with a value for every month is obtained. This seasonal pattern follows.

% Of Yearly Average Trend

Month	%	Month	%
Jan	99.9	Jul	104.4
Feb	98.7	Aug	102.1
Mar	101.1	Sep	92.5
Apr	104.7	Oct	91.4
May	105.2	Nov	96.2
Jun	105.0	Dec	98.8

The figure of 99.9 for January means that when the values for all the Januarys on Figure 2 are averaged, the result is 99.9. Or, that, on the average, January soybean prices are 99.9% of the yearly average (the 12 months centered at January).

On the average, therefore, the high month of the year is May. Over the past 13 years, the price of soybeans at May have been 105.2% of the yearly average trend. The low month of the year has been October, when prices have averaged 91.4% of the yearly level at that point.

If these average percentages are applied to the line of the yearly average trend, we obtain a synthesis value which is shown on Figure 4 as the broken line. The actual price is also shown on Figure 4 on the next page.

The synthesis line on Figure 4 is an imaginary line—it is important to keep this in mind.

Somehow in the drawing of a line on a chart one imparts a quality of reality which may not be present at all. The solid line on Figure 4 does represent actual situations.

The synthesis line, then, includes two factors: the yearly average trend, and the average seasonal pattern.

The yearly average trend is shown as the broken line on Figure 1. The extension of this line past

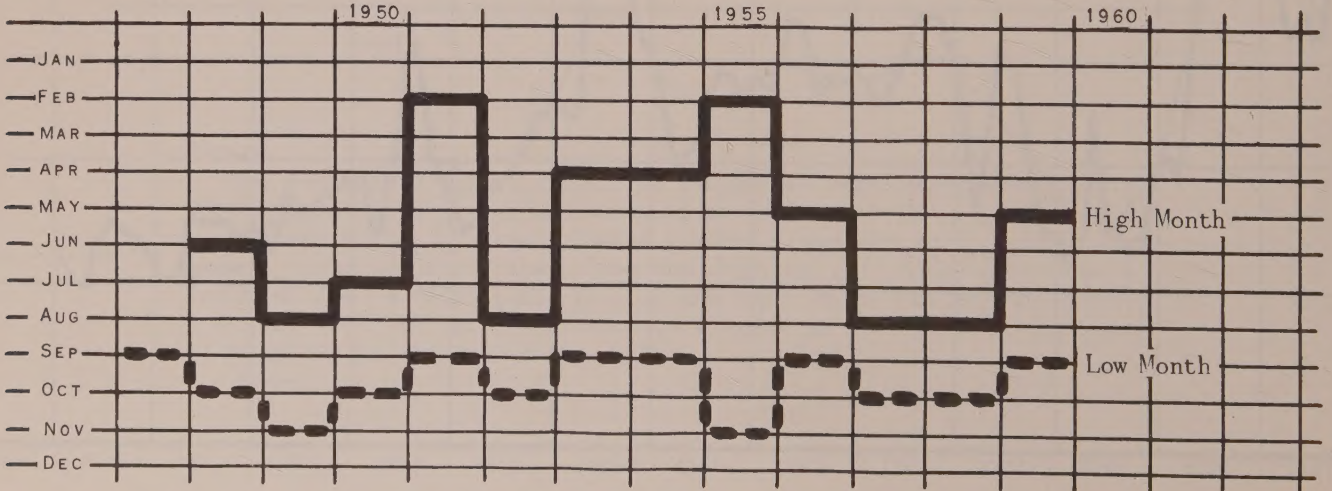

Fig. 3 Soybean Prices—Months of High and Low (Based on Trend)

March 1959 is pure guesswork. It is altogether within your province to move this extension up or down, or to turn it anyway you please.

The long steady down-hill move of soybean prices may be reaching a bottom--or it may continue down toward $1.75, or even $1.50. Or it may turn up again and go back toward $2.50. It is anybody's guess.

It appears reasonable to us to extend the line through 1960 at the $2.10 level. But it is doubtful that this long smooth bottom will actually occur. However, knowing nothing whatever about the crop and marketing conditions which affect soybean prices we cannot adjust the extension to match any special knowledge. We just use what appears on the face of the chart to be reasonable.

As time passes and additional data become available, we can change the extension to match new developments.

The second factor used in the synthesis is the average 12-month cycle as given in the table. (One simply multiplies whatever trend one decides on by the percentages given in the table to get an anticipated price.)

The seasonal pattern is a rigid line--it is a *fact*, for instance, that over the past 13 years the price of soybeans during the month of May has averaged 105.5% of the average yearly price.

Current actual experience may not exactly match the average past performance, but the pattern will *probably* be followed, particularly during the latter part of the year. It is certainly smarter to expect a bulge in soybean prices in the early part of the year, followed by a drop in the autumn, than not to expect it.

We will follow the manner in which soybean prices conform to the seasonal pattern in the future by reporting on it from time to time in the Round-Up section of the report. Also we hope to extend the work to discover additional usable cycles.

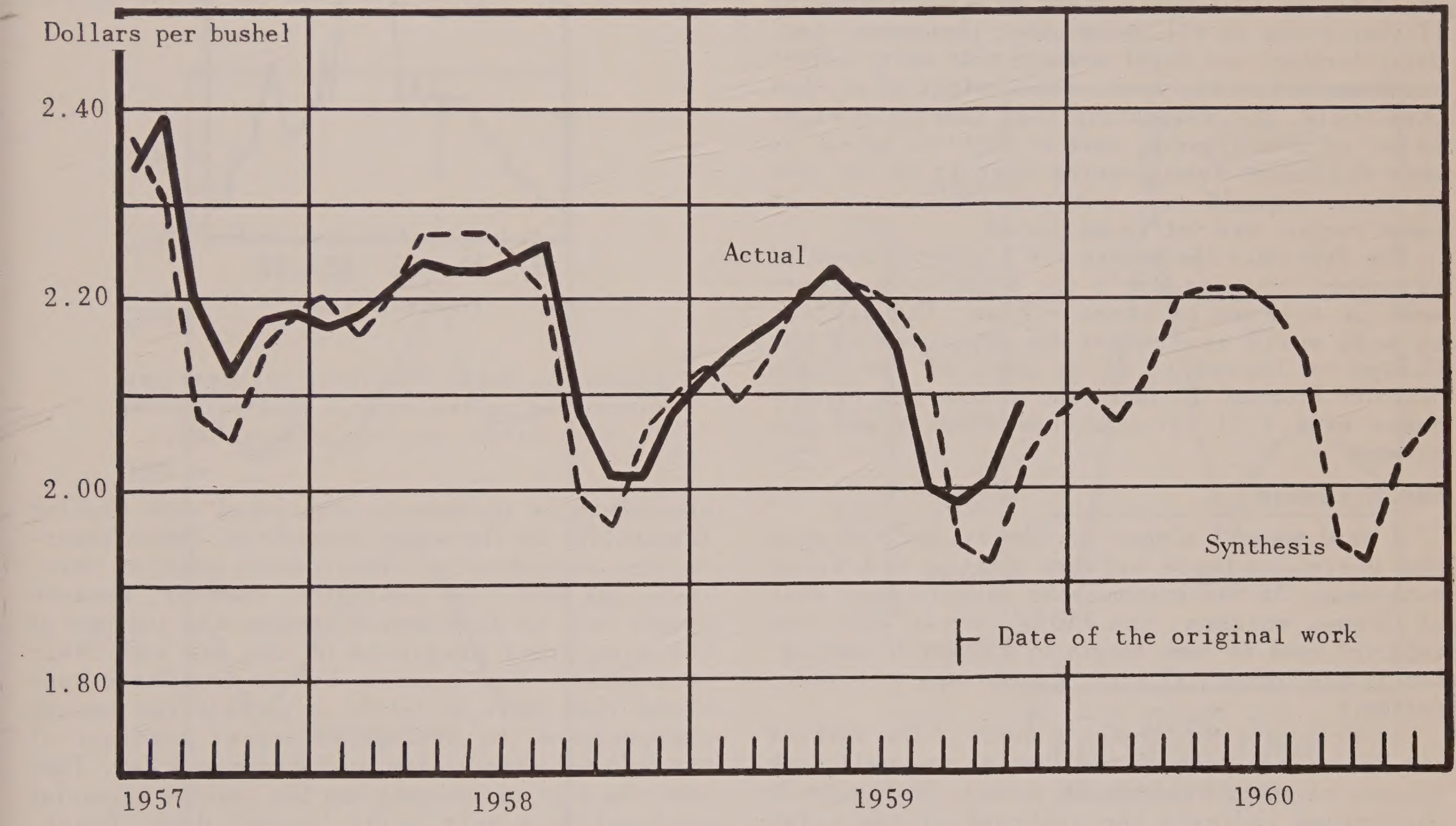

Fig.4 Soybean Prices—Actual vs Synthesis of Seasonal Pattern and Trend

The work used as the basis for this article was done with figures through September, 1959. After the write-up was completed and the charts drawn, the October and November average prices of soybeans were released. They have been added to the charts, but no changes in the original conclusions are necessary. In November, the average price of No. 1 yellow soybeans at Illinois points was $2.09 per bushel.

Later news indicates the possibility of a shutdown of soybean crushing plants. Of course, whatever effect this may have on the price of soybeans is something aside from the seasonal pattern and may *temporarily* distort it.

CYCLES, THE SCIENCE — PART IV:

THE SUN AS A CAUSE OF CYCLES – CONTINUED

BY EDWARD R. DEWEY

The thing that interests everybody is, do sunspots affect human beings? More particularly, does the 11-year sunspot cycle cause an 11-year cycle in war, business, stock prices, disease, suicides, earthquakes, weather, and all the other things in which we human beings are interested?

A Solar-Terrestrial Relationship Does Exist

As I shall show you in a moment, there does indeed seem to be a correspondence between solar outbreaks and deaths from suicide, mental disorders, disease of the nerves, sense organs, circulatory system, tumors, and tuberculosis. As sunspots and solar outbreaks are related, and as there is an 11-year cycle in sunspots, one would expect that there might be a corresponding 11-year cycle in all these other phenomena, too. Going further, one might suspect that wars, prices, business activity, etc., etc., might also show this cycle. But suspecting that something *might* be so, or even figuring that it *ought* to be so, is very different from proving that it *is* so. And to date, I would say, sunspots, as a cause of human cycles, are yet to be proved.

The fact that the matter isn't proved, doesn't, of course, mean it isn't so. Sunspots may very well be a cause of human cycles. The subject is well worth investigating. It's one of the things we intend to do as part of the Basic Research Program. In fact, the studies are already under way! I'll let you know when we get the answers.

The Evidence

I said above I'd show you the evidence showing the correspondence between deaths and solar outbreaks. It was accumulated largely by a pair of German workers, the Düils, whose work was reported upon at some length by Ellsworth Huntington in his monumental work, *Mainsprings of Civilization.**

In Professor Huntington's words, "The work of the Düils is so suggestive that we may well look at some of their evidence in detail. In Figure 70 the arrows indicate the outbreak of two solar eruptions of incandescent gas at an interval of about 3 hours. In such eruptions the gas shoots from the solar atmosphere at enormous speed and may rise 100,000 miles. The jagged curves of Figure 70 are instrumental records of atmospheric electricity at St. Cyr in France and at Tunis, 800 miles away in North Africa. They illustrate the fact that electrical instability in the earth's atmosphere is intimately associated with similar instability in the sun's atmosphere. Radio observations and magnetic disturbances confirm this. There has been much confusion, however, because people fail to distinguish between the *average* of the electrical gradients of the air and their *variability*. For example, Kahler and Chree concluded that there is little or no relation between sunspots and the average potential gradient of atmospheric electricity at Potsdam and Kew. They used the size of sunspots and the average potential gradient on electrically 'quiet' days. Bauer, however, had already shown that 'it is the *variability* in sunspottedness, rather than sunspottedness itself, which may approximate to a true measure of the kind of solar activity which may be related to geophysical phenomena.' This seems to be equally true in respect to solar activity in relation to psychological conditions of the kind now under discussion.

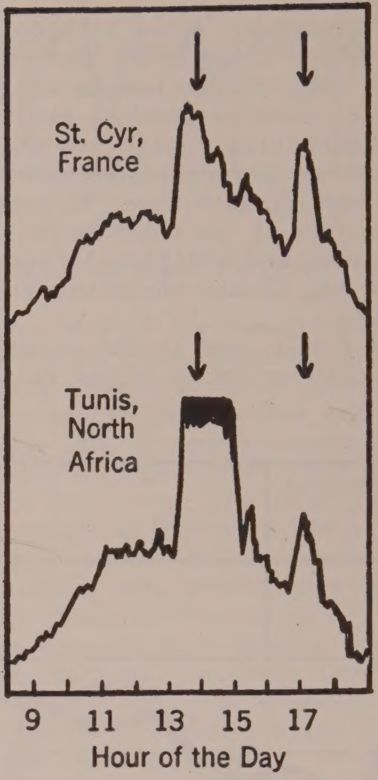

FIGURE 70. SOLAR ERUPTIONS (ARROWS) AND VARIATIONS IN ATMOSPHERIC ELECTRICITY AT ST. CYR (PARIS) AND TUNIS (AFTER DÜLL).

The Findings Of The Düills

"Some of the Düills' findings are summed up in Figures 71-74. In all of these the dotted line represents the original data; whereas the solid line has been smoothed by the formula, $\frac{a + 2b + c}{4}$.

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In Figure 71 the arrow indicates the 15 days during February, March, and April, 1930, when Copenhagen, Frankfurt-am-Main, and Zurich had the most deaths from suicide, mental disorders, and diseases of the nerves, sense organs, and circulatory system. The upper curve indicated the deaths from these causes on the 12 days before and the 6 days after the days of maximum mortality. The lower curve indicates the amount of magnetic disturbance on these same days. The two curves run almost parallel, but the magnetic curve reaches a maximum a little before the other. It is not at all likely that a curve based on 3,700 deaths would agree in this way with an electromagnetic curve by accident. The possibility of an accidental agreement is rendered still more remote by the fact that similar comparisons for the other three seasons give almost identically the same result.

"In Figure 72 the arrow indicates 735 days when especially numerous calcium flocculi on the sun's surface betokened special activity in the solar atmosphere. The curve shows how suddenly suicides in Denmark, Germany, and Switzerland increase when the sun becomes excited. This close connection between a nervous reaction and solar activity suggests the same sort of relationship that the 41-month cycle seems to show between the solar constant, atmospheric electricity, and business. The practical importance of this relationship may be gauged by the scale of percentages on the left of Figure 72. The highest point of the suicide curve is about 7 or 8 per cent above the lowest point. . .Other cycles can also be detected in suicide, and the finding of cycles due to many different causes is to be expected.

"Suicide is not the only form of death which is related to short changes in solar activity. Figure 73 shows how calcium flocculi on the sun's surface and deaths from tumors in Europe vary before and after days of new outbreaks of activity in the central zone of the sun. Figure 74 portrays the relation between days with strong eruptions in the sun's atmosphere, on the one hand, and both high-frequency electrical 'showers' and deaths from tuberculosis, on the other hand. The close

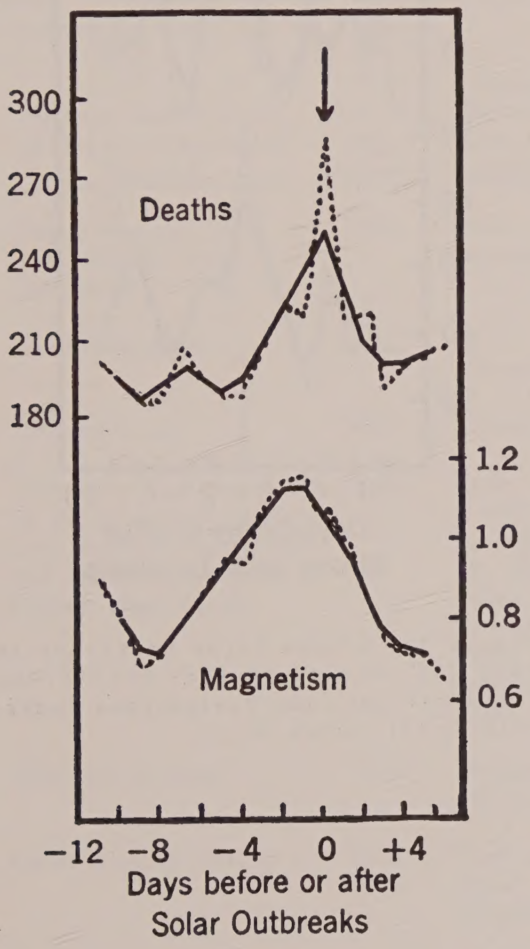

Figure 71. Deaths, Compared with Magnetic Disturbances (after Düll).

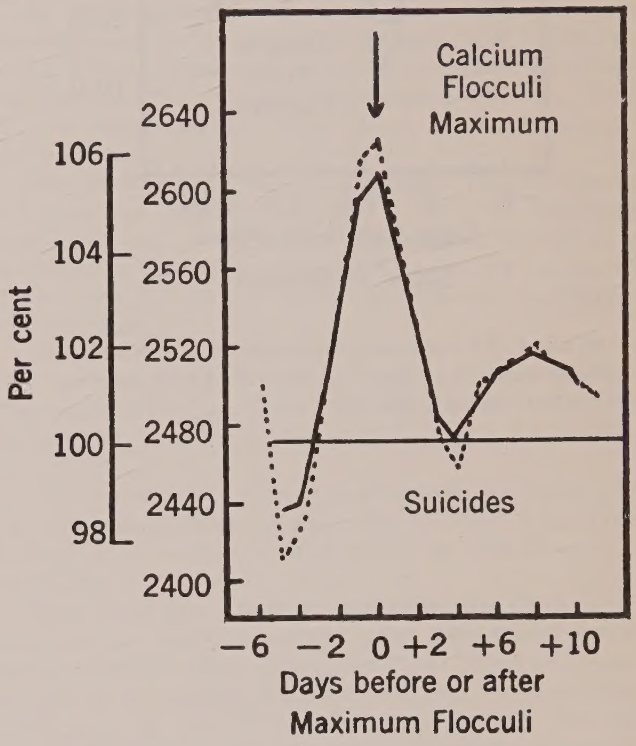

Figure 72. Suicides Compared with Heavy Concentrations of Calcium Flocculi on Sun's Surface (after Düll). Suicides in Berlin, 1917-19, 1903-32; Copenhagen, Frankfurt-am-Main, Hamburg, and Zurich, 1928-32.

relationships suggested by all these diagrams, together with a mass of supporting material cited by the Dülls, have cumulative weight. There is scarcely room for doubt that through some electrical process sudden disturbances of the sun's atmosphere are associated with a well-defined influence upon man's health and psychological reactions."

The work of the Dülls throws some light on *how* sunspots might effect human beings nervously, and thus physiologically, economically, and sociologically. The next step is to see if they do.

Some of the alleged economic effects (bringing up to date the work of Garcia-Mata and Felix Shaffner, for example) will be discussed in an early issue.

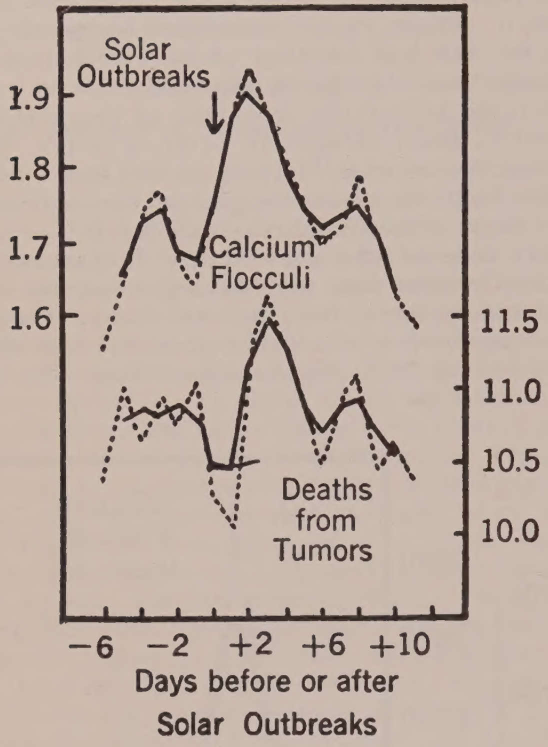

Figure 73. Solar Outbursts (Arrow), Calcium, Flocculi, and Deaths from Tumors (after Düll).

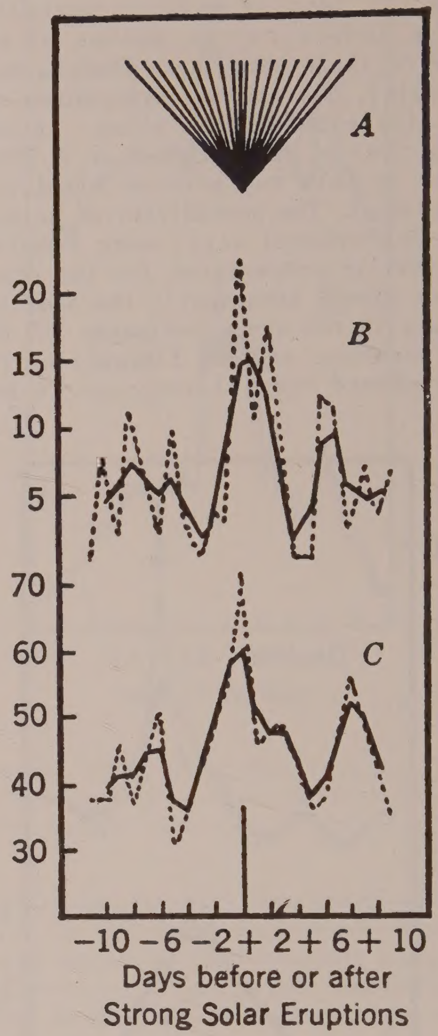

Figure 74. Strong Solar Eruptions in 1936 (A), High-Frequency Electrical "Showers" (B), and Deaths from Tuberculosis (C) (after Düll).

Research by Others

THE DECENNIAL PATTERN IN STOCK PRICES

In the December issue of *Cycles* we reviewed the recent book, *Common Stocks and Business Cycles*, by Edgar Lawrence Smith. In the book the emphasis was on an advanced phase of Smith's research—the possible *causes* of market turns.

Here we want to concern ourselves with Smith's assumption of a basic decennial pattern in the price of stocks. In addition to the inquiries which resulted from the book review, we have received from time to time general inquiries about and comments on Smith's work.

In November a member sent a brief comparison of Smith's original basic decennial pattern with the actual market action during the 1950 decade.

I should point out that Smith called this pattern a "tendency". An individual decade will not match the average past experience precisely. What we are looking for in the comparison between past decades and the 1950 decade is a very general conformance. Our correspondent outlined his comparison beginning with 1953 as follows:

Year In Decade	Summary Description of Smith's Decennial Pattern	Year in 1950 Decade	Actual Behavior Dow-Jones Industrials
III	Down, except 1933 when dollar was devalued	1953	Down, to September
IV	Indeterminate	1954	Up, strongly
V	Strongly up	1955	Strongly Up
VI	"Saddle", February or March higher than some month between May and August; November higher than March	1956	High, April 9 and August 9. Low, May 29. The November rally did not reach either previous high.
VII	Ordinarily down	1957	Dropped over 100 points
VIII	Consistently rising	1958	Went up about 160 points.
IX	Continue the upward movement, at least until September	1959	Advance to August 2.

I should bring this more up to date for you by pointing out that Smith said, in describing the tendency of the market to repeat itself every ten years, that the rise in the ninth year might continue on to June of the tenth year, with the peak month falling between September and June. The recent advance in the Dow-Jones Industrial Average (this is being written December 16) still fits into the pattern.

Of the tenth year (1960) Smith wrote in 1939;* "In the period covered by this chart (1881 to 1936) there is no case where January of an X year was not substantially higher than some subsequent month in the same year. . ."

That is, the general tendency in the tenth year of the decade is down.

As our correspondent pointed out, "In spite of occasional inconsistencies, the above tabulation shows the Decennial Pattern has been working out very well during most of the 1950's. . .it will be interesting to watch the market pattern unfold in 1960!"

As an independent check on the conclusions about the 10-year pattern, we averaged the Industrial Stock Price Index and plotted it. Then we plotted the Dow-Jones Industrial Averages for the 1950's on the same chart. This chart is reproduced on the next page.

The decade figures are averaged in this manner: all the one years together, all the two years together, etc. We started the work with 1871, and carried it forward through 1950, which means that there are 24 years more than were in Smith's earlier work.

The *values* of the two lines on the chart cannot be compared directly and the side scale is therefore omitted. However, as a point of current reference, the 600 Dow-Jones level is noted on the chart.

All that is to be considered on this chart is the comparative contour of the two lines. Except for years I and II, the similarity is striking.

The average 10-year pattern we obtained is similar to Smith's except that the third year is rather level than down, and the fourth year is slightly up rather than level, or indeterminate. (However, in the 96 months included in the third year averages, there were slightly more months which were down from the previous month than months which were up from the previous month.)

We considered just the absolute levels in computing an approximation to the 10-year pattern. A more thorough study could take direction of move and speed (extent of move) under consideration.

Despite the admitted crudities of the 10-year pattern we used, the resemblence of the behavior of the Dow-Jones Averages in the 1950's is apparent and needs no comment except to say that Smith's work was published in 1939 or 20 years ago.

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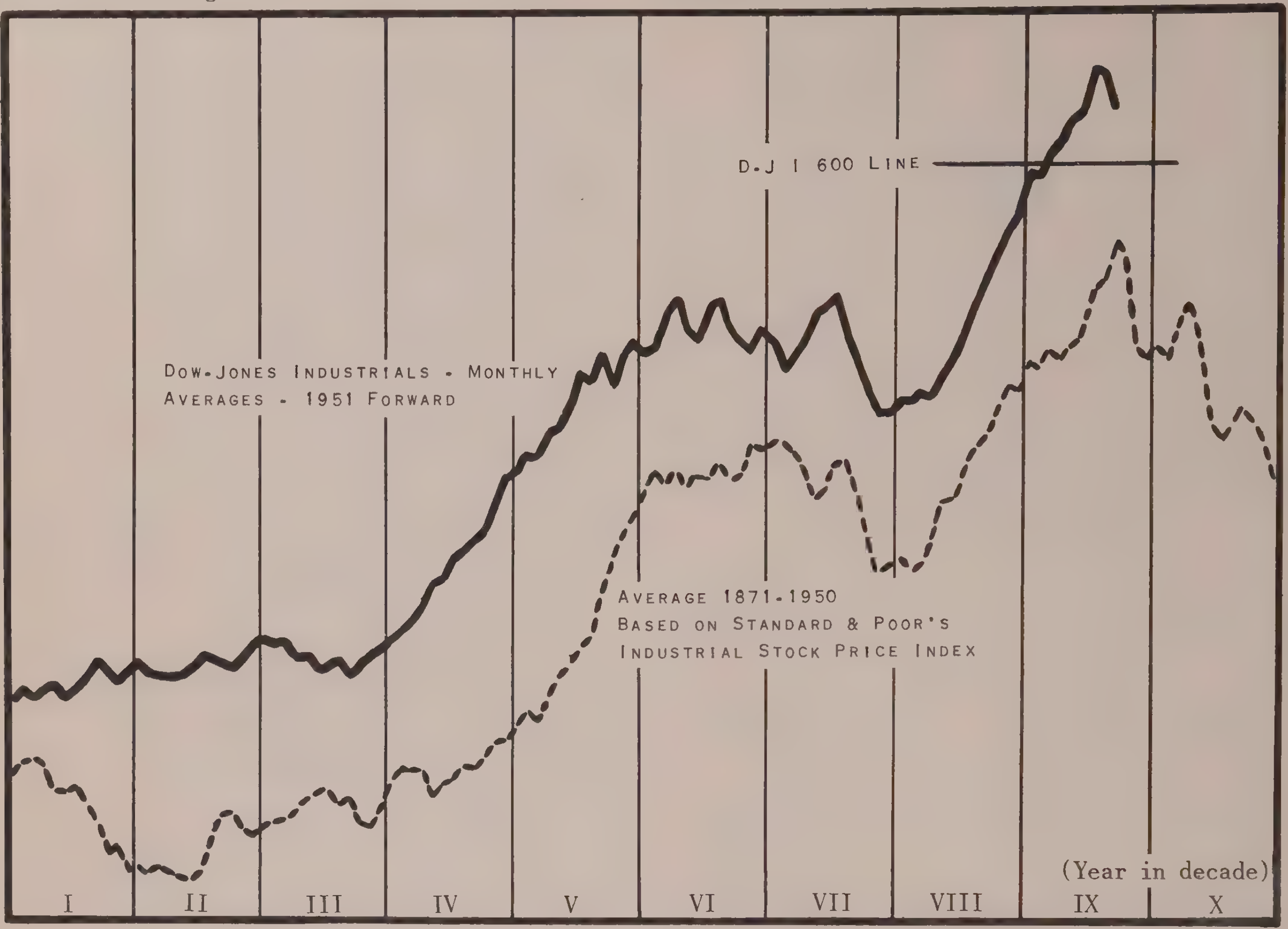
* TIDES IN THE AFFAIRS OF MEN, BY EDGAR LAWRENCE SMITH. COPYRIGHT, 1939 BY THE MACMILLAN COMPANY. SEE PAGES 9, 10, AND 11 FOR THE REFERENCES DISCUSSED ABOVE.

In the past, the tenth or zero years in the decade have been more down than up, on the average. As our correspondent noted, the implications for 1960 are interesting!

This article was suggested by a letter from Warren Ordway of Newton Centre, Massachusetts, and the table used in the article was prepared by Mr. Ordway. Smith's Decennial Pattern has also been brought up to date from time to time by the brokerage firm of Arthur Wiesenberger & Company of 61 Broadway, New York 6, New York, in their bulletin "Wiesenberger Investment Report". G. S.



Decennial Pattern in Stock Prices (After Smith)

A 100-YEAR WEATHER CYCLE

For our study of wars we are using the Indexes of Battles (International and Civil) which were compiled by Professor Raymond H. Wheeler. These indexes are, however, only a part of the work on history and cycles in history which Professor Wheeler has done.

The compilation of the 2500 years of records from which Wheeler derived his hypothesis occupied as many as 200 people and took 20 years of work!

As the work progressed, Wheeler noticed a marked correspondence between the historical record of human events and the weather of the time at which the events occurred. Wheeler's chief interest was in the relation and reaction of man to his environment. Weather and climate are of course a major element in the environment.

Wheeler found many cycles during the course of this work, but he felt the most important one to be a climate cycle of about 100 years duration. To this 100-year cycle of weather change he tied the record of human events. He concluded that the two factors, weather and human events, were intimately related

The 100-year Cycle

The 100-year cycle in weather is, according to Wheeler, divided into four phases. A diagrammatic representation of the four phases of the cycle is shown below. The cycle averages 100 years, although it may run as short as 70 years and as long as 120 years. Also, the phases are not precisely equal in duration and may run longer or shorter. In general, the cycle has a warm and a cold phase, and the warm phase has a wet and dry period; the cold phase has a wet and dry period also.

The expressions, cold-dry or warm-wet, etc., are generalities. In any particular period there may be variations. That is, there may be a warm-wet year during a cold-dry period—even though over all the period is more cold-dry than anything else. The expressions are generalities in terms of geography also, because of the vagaries of weather. (Peoria may have a very dry year during a wet phase.) The terms are intended to describe conditions in general, and not the weather conditions for specific geographic locations at specific times.

Wheeler observed that the general character of the climate over a period of years can be seen in historical cycles. Because people are affected by the character of the weather, the same type of events have occurred throughout history during the same phases of the 100 year climate cycle.

Of course every single event does not fit into the pattern. For example, the cold-dry period at the beginning of the chart is a time during which there are assassinations—by this I presume that Wheeler means that there are *more* assassinations during cold-dry periods than at other times.

Cold-Dry

The cold-dry period is, according to Wheeler, a time of general individualism with weak governments, migrations and other mob actions such as race riots. Class struggles and civil wars ranging from palace intrigues to revolutions occur during the general anarchy of the cold-dry period. People are cosmopolitan and Epicurean, borrowing culture and living by superficial and skeptical philosophies.

As this phase nears an end and fades into the next phase leadership emerges and societies become stabilized; new governments develop and nationistic spirit revives. Wars take the form of expansion and imperialistic wars.

In the transition from the cold to the warm era human energies operate at a high level (just as in the spring of the year). Learning is revived; genius appears; industrial revolutions occur; crops are good and times are prosperous.

Warm-Wet

The warm-wet period sees the climax of the trends started in the previous transition, with achievement becoming organized, and the emphasis being put on co-operation and integration of views and effort rather than individual accomplishment. Interest in the state rather than the individual develops and governments become more rigid and centralized.

Warm-Dry

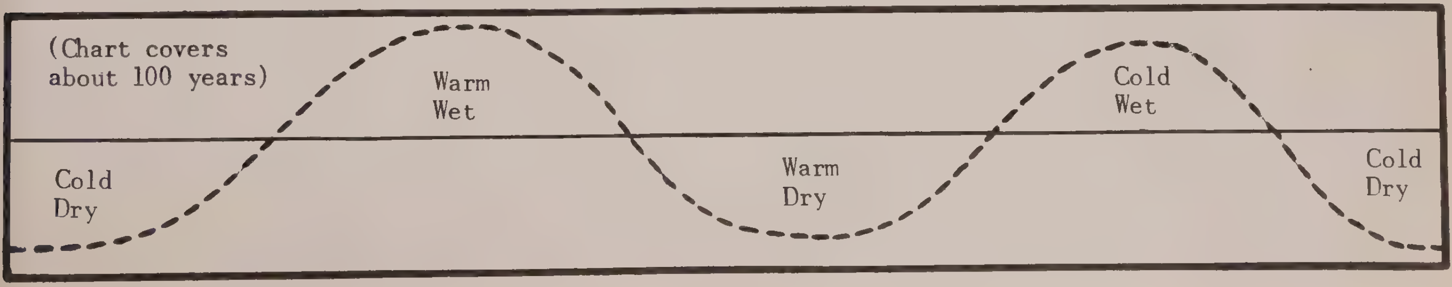
As the weather changes from a general warm-wet phase to a warm-dry phase, the rigid governments of the previous period become despotic, police states emerge and personal freedom declines. Behavior patterns are introverted—in art, surrealistic and impressionistic patterns develop and in business, aggressiveness and self-confidence decline with subsequent depressions and the collapse of economic systems.

During the transition to the next cold period, according to Wheeler, wars reflect the culmination of the decadence of the previous period and becomes the cruel total-war type with whole populations slaughtered or enslaved. However, as the temperature falls and rainfall increases, activity increases, crops are again good, and general revival begins.

Cold-Wet

The cold-wet phases see the re-emergence of individualistic philosophy with decentralizing trends in government and business. It was a period of emancipation and natural behavior; art is straightforward and simple; scholarship follows mechanistic lines. These trends continue and grow until they reach a climax of general anarchy during the cold-dry phase mentioned above.

This brief summary of Wheeler's conclusions cannot do justice to the details and depths of his analysis; nor is it possible at this point to evaluate his conclusions. In 1949 Wheeler said that we were in a cold-wet period, and that after our passing through the dry phase, another warm-wet era with its attendant "golden age" could develop.



Letters to the Editor

SUNSPOTS

Dear Mr. Dewey:

There is an omission in the Schove data. I forget the exact date but it is very easy to locate by the following procedure. Arrange his dates for sunspot maxima with a one to one correspondence between consecutive dates as nearly as possible 633.08 years apart. You will come to a place where there is a clear gap.

Mostly what I have done with this problem is to urge other people to look into it. . .

It is the habit of mind of anyone used to physical reasoning to look to some source of energy as the prime cause of a chain of events. So this prejudice says to me one should look for the cause of economics and weather cycles, which are much the same things, in fluctuations of the solar output of corpuscular radiation. This heats the polar air to no mean extent and as you have no doubt noticed in the *American Scientist* lately (the article on timing mechanisms in living things) may have quite a direct effect on how one feels.

Hoping you have much luck with your efforts.

Kingston, Mass. William J. Hitchcock

DROUGHT

Dear Mr. Dewey:

While on vacation in Tucson this past June, I clipped the enclosed item (about the work of Professor Douglass who is on your Committee from the June 25 issue of the *Arizona Daily News*. . .

Back in 1931 I assisted another researcher in tree-ring study in the Converse Basin section of General Grant Park of California. We found giant Sequoia stumps with chiseled-in numbers placed there by Dr. Douglass and his students about 1905, I believe. These trees had been recklessly logged off during the 1875 to 1900 period. It was interesting to us to locate and re-check ring counts made so many years earlier.

Encinco, California Howard A. Fast

Editor's Note: In the newspaper article Doctor Douglass forecast a 40-year drought period for Arizona. 1959 has been the driest year since 1900 in Arizona, and marks the beginning of a long dry spell for the area.

World famous as an astronomer, and one of the three top authorities on the planet Mars, Douglass also originated the science of dendrochronology, the study of tree-rings. In the 1000 year records of tree-ring growth he has developed he has found a basic weather cycle of around 80 years duration, with about 40 wet years and 40 dry years alternating.

The dry periods contain more dry years than wet years, and vice versa. Although the long range system of weather forecasting Douglass is working on is not quite complete, it is based on tree-rings, sunspots and planetary movements.

It is not possible yet to predict just how severe the coming dry spell will be, and the work does not give day-to-day forecasts. It is designed rather to predict general wetter than normal and drier than normal periods extending over many years.

THE STOCK MARKET

Dear Mr. Dewey:

Some of us who make our living in the brokerage business probably winced at your paragraph in the Director's Letter in the December issue when you said "stock trading merely benefits one man at the expense of another, but it doesn't produce anything. Stock speculation is a game of skill like playing bridge for money, or betting on the horses. It's good fun (especially for the winners) but no one can say it does anything for humanity."

Didn't you forget for the moment the basic differences which I know you were taught in your early economic courses between speculation and gambling? I don't mean to condone excessive or uninformed dealing in stocks by those who fancy themselves as traders when they are little better than gamblers. They will lose sooner or later, probably sooner, until they learn by their mistakes or by the education which The Stock Exchange and most brokers are trying to provide for them at considerable expense. Neither do I think that the motives of most buyers and sellers of stocks are other than to make money. Come to think of it, is that so different from the motivation of those engaged in industrial production? You know that there would be very little industrial production without capital. You also know where capital comes from (in a free country) and the part that a broad active market in stocks plays in the raising of capital. Even bonds and preferred stocks could not be sold in most cases were it not for the equity underneath them consisting of their common shares with a broad market.

This matter of liquidity is of more importance than generally realized. Without a broad active market people would be reluctant to commit their money to stocks and bonds. The ability to withdraw funds in an emergency causes people to buy securities in preference to real estate, mortgages, industrial businesses and other less liquid investments.

Speculation serves a useful function in connection with raising capital for new industries such as electronics currently thought to be still in the early stages of important growth. Despite all the abuses and unsavory aspects when it is overdone or the rules governing it are not obeyed, I do not agree with your statement that "no one can say it does anything for humanity."

It is a vital part of the machinery by which capital in our free economy flows from savers to industry.

My purpose in writing you is not to suggest you turn your letters into a tipster service. Keep to your present high standards, but in so doing continue to do your part to educate your members and other readers so that those who are interested in stocks will act more intelligently in their buying and selling of stocks and bonds, as well as in guiding their industrial operations.

Hayden, Stone & Co., New York George B. Seager

Comment: A market place where people can buy and sell securities is essential to our economy. As you say, it provides liquidity and serves a useful function in connection with raising capital.

There is no difference in our thinking. The apparent difference comes from the fact the word speculation and the word trading have more than one meaning.

Webster gives seven different meanings for the word speculation. One of them reads ". . .dealing with a view to making a profit from conjectural fluctuations in the price rather than from the earning of the ordinary profit of trade, or by entering into a business venture involving unusual risks for a chance of an unusually large gain or profit." This is quite different from buying and selling for investment or liquidity.

Some people might not agree with me, but for my part, I see nothing wrong in speculation; but when applied to stocks I see no social gain that could not be supplied by a broad active market created by those who wanted to buy in order to own (more or less permanently) and who wanted to sell in order to liquidate (more or less permanently).

Trade is another word that has a variety of meanings. I was using it in the sense in which it is ordinarily used by brokers to mean buying and selling for a very short term profit—in and out operations.

The net of it is that I was using the words trading and speculation as synonyms for gambling. In your letter, you were using the same words for investing and/or liquidating. It would have been clearer if I had used the word gambling in my letter. If so, I am sure you would have agreed with my comments just as I agree with yours. E. R. D.

* * *

Dear Mr. Dewey:

In the December issue, you wrote: ". . .stock trading merely benefits one man at the expense of another. . .but it doesn't produce anything." The concept that in most transactions one person loses and one person gains, although often expressed, is nonsense, and it makes no difference whether one is trading stocks or cars. He who sells gains because he prefers the money to the thing sold. He who buys gains because he prefers the thing bought to the money or other consideration paid for it.

Investment in a free market is of real benefit to mankind. In fact, the investor tends to be rewarded proportionately to the public benefits derived from his investment. Normally there is much competition for capital funds. If one invests in a declining industry (slackening in the rate of customer demand) the investor may gain little or he may lose. If he invests in a dynamic, growth industry (customer demand rising), he may expect greater than average financial reward *because his investment yields greater public (customer) benefits.*

I don't think you should be concerned about "status". The pursuit of truth and knowledge are what matters, and working truths on security prices are still truths.

Wichita, Kansas Kenneth L. Myers

Comment: You make a good point. It is quite true that a sale satisfies both buyer and seller—otherwise there would be no sale. The seller gets the money he wants, and the buyer gets the stock he wants. However, unless the seller then turns around and buys into *new* issues with his cash, I do not see that any new capital has been provided by the transaction.

The individuals who provide new capital for industry by investing in new issues do indeed really *risk* money. Because of their faith they supply money for the purchase of tools. They are really kingpins in the system.

I did not mean to slur people who trade on the exchanges. It is a fascinating game of skill. It certainly follows that a free system where an individual can supply (or not supply as he chooses) new capital must also allow for the individual to move in and out of the market as he chooses.

And of course you are absolutely right that a truth is a truth in any place, including the stock market. However, an opinion in regard to what the market is going to do is not necessarily a truth!

E. R. D.

* * *

Dear Mr. Dewey:

I have just read the Director's Letter in your December issue of Cycles and your reference to the member who showed you an indicator that turns ahead of stock prices much the same as the Geisinger Indicator does for industrial production. You said that you rejected the offer to have this printed in *Cycles* and gave the reasons therefor.

On another page—No. 273—under Basic Research you favor research and experimentation to develop the science of cycles and define the important things to know about any given rhythm and the steps to take in creating and developing this science. This appears directly contradictory to your reported action with respect to the proposed indicator reflecting changes in the stock market.

Isn't it true that according to your own article on Basic Research that whenever study reveals what appears to be a cycle it never can be considered dependable until further practice and study have revealed ways to further perfect the theory?

Isn't it also true that few things, and few cycles, have any great amount of evidence as to all factors which affect or influence them? Isn't it also true that nearly everything pertaining to the stock market is reported, examined, and analyzed, with greater exactitude than on any other subject it is possible to select? In practically all cycles events in distant places may influence the cycle of anything you are studying —example sunspots—and what directly affects one cycle may also indirectly affect many other kinds of cycles.

Also, are not most cycles composed of a myriad of smaller cycles, just as the over all cycle of the stock market is a result of the combination of cycles in each and everyone of the different stocks which make up the whole? Isn't it true that breaking down the big market cycle into its separate parts reveals factors which send up one stock and depress another? Is it not also true that more people everywhere have access to market figures,—and are more interested in this type of cycle? Do not all of the reasons you expressed against the forecasting of stock price cycles apply with more force against any other kind of cycle?

I would like to know what the man you refer to had to offer. May I (as an admiring member) urge that you include regularly a section on stock market cycles.

Washington, D. C. A. R. Morrison

Comment: The stock market indicator that I referred to in the Director's Letter for December, like the Geisinger Indicator, has nothing to do with the regularly recurring cycles that constitute our field. If it had, I would most certainly have accepted it for publication.

The fourth paragraph of your letter states the matter very well indeed and is the reason we spend so much time on stock market cycles—every issue in 1959 (except one) contained something on this subject. We consistently determine cycles in the stock market and project them into the future, but I am sure our Directors are right in feeling that we should not engage in stock market forecasting as such, not on the grounds that such forecasting is bad, but because it is outside our proper field of activity.

It is a pleasure to give you the name of the man referred to—it is R. Bruce Brownlee, 49 Waller Avenue, White Plains, New York. He does not issue a service, but has objective methods from which I think a service could be built. E. R. D.

CYCLES

Dear Mr. Dewey:

I would like to see you put your clerks to work compiling a reference volume which shows every known, half-known or suspected cycle, rhythm or sequence. The researcher could then flip open your volume and correlate his study to tree rings, toadstools or thundershowers.

I disagree with you about cause and laws. You don't have to know cause to make predictions. We do not know *why* there is an earth circling the sun, but we can predict its course. We don't know what caused one particular species to become human, but we can predict quite a bit—and with workable accuracy. (And if we know more of the pulse-beats and vibrations of the universe, we could predict human behavior with greater accuracy.)

Abilene, Texas R. A. Purifoy, Jr.

Comment: You are right, I could dictate several volumes in several months time (although they would be pretty poor ones), but until recent contributions, I have had no money to hire a girl to dictate them to. Your suggestion of a clerk to compile a reference volume coincides exactly with my desires. Such a compilation has been on my docket for nearly 20 years. With the money you and others have contributed, it is now a possibility. However, using the material in our library alone, I suspect, will take a girl about six months to do the job.

I agree we don't need to know cause to make predictions if we know laws, but it is usually vastly simpler to know laws if we do know cause.

For example, the ancients had pretty good knowledge of planetary movements, even when they thought the earth was the center of the solar system, but when they learned that the cause of these movements was the revolution of the planets around the sun, everything became much simpler.

E. R. D.

MEXICAN MOUNDS

A member sent a clipping from the *New York Times* which tells of a thousand year old religious mound discovered in the Painted Rock Reservoir area near Gila Bend, Arizona. A slice into the mound revealed it had been enlarged regularly about every fifty-two years. It is believed by the archeologists that the work on the mound was done on the basis of a definite religious cycle which the Mexican Indian followed.

The University of Arizona had been working in the area to salvage archeological artifacts prior to the flooding by the Painted Rock Reservoir.

It is not known why the mound was enlarged periodically, but it is evidence that the influence of the Mexican Indian culture had spread into what is now the southwestern United States, particularly because of the similar religious cycle.

The Cycle Round-up

FEBRUARY 1960

Series	Unit	Month	Amount
Aluminum Production	Thousand tons	Oct	173.7
Automobile Factory Sales	Thousand cars	Oct Nov	537r 255p
Cocoa Bean Prices—Accra, New York	Cents per pound	Sep Oct	38.2 35.8
Copper Prices—Electrolytic, New York	Cents per pound	Nov	34.06
Corn Prices—No. 3 Yellow, Chicago	Cents per bushel	Nov	110.0
Egg Prices—Wholesale, Extras, Large, Chicago	Cents per dozen	Nov	32.3
Hog Prices—Wholesale, All Grades, Chicago	Dol. per 100 lb.	Oct Nov	12.60 12.19
Liabilities of Failures—Dun & Bradstreet	Million dollars	Nov	53
Residential Construction Contracts—F. W. Dodge Corp.	Million dollars	Oct	1,515
Stock Prices—Standard & Poor's Combined Index	1941-43=10	Nov	57.23
Unemployment	Per cent	Nov	5.3%
Wheat Prices—No. 1, D. N. S., Minneapolis	Cents per bushel	Nov	229.9

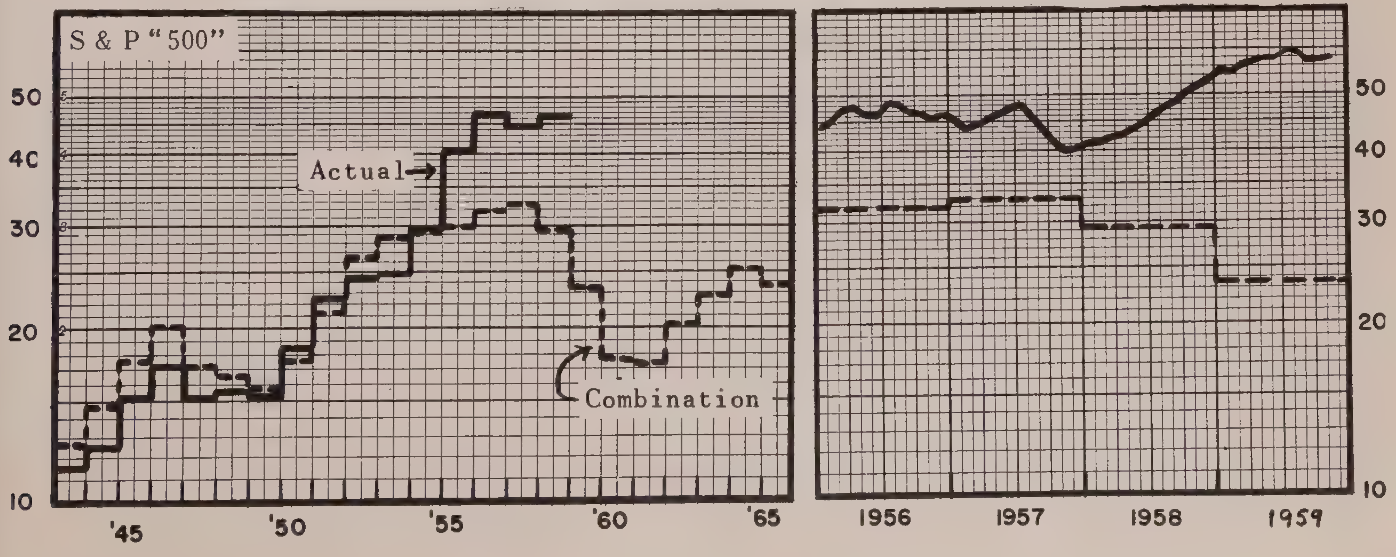
p - preliminary; r - revised

STOCK PRICES

The broken line on the chart below is a combination of the 11 cycles outlined on page 173 of the August 1959 issue.

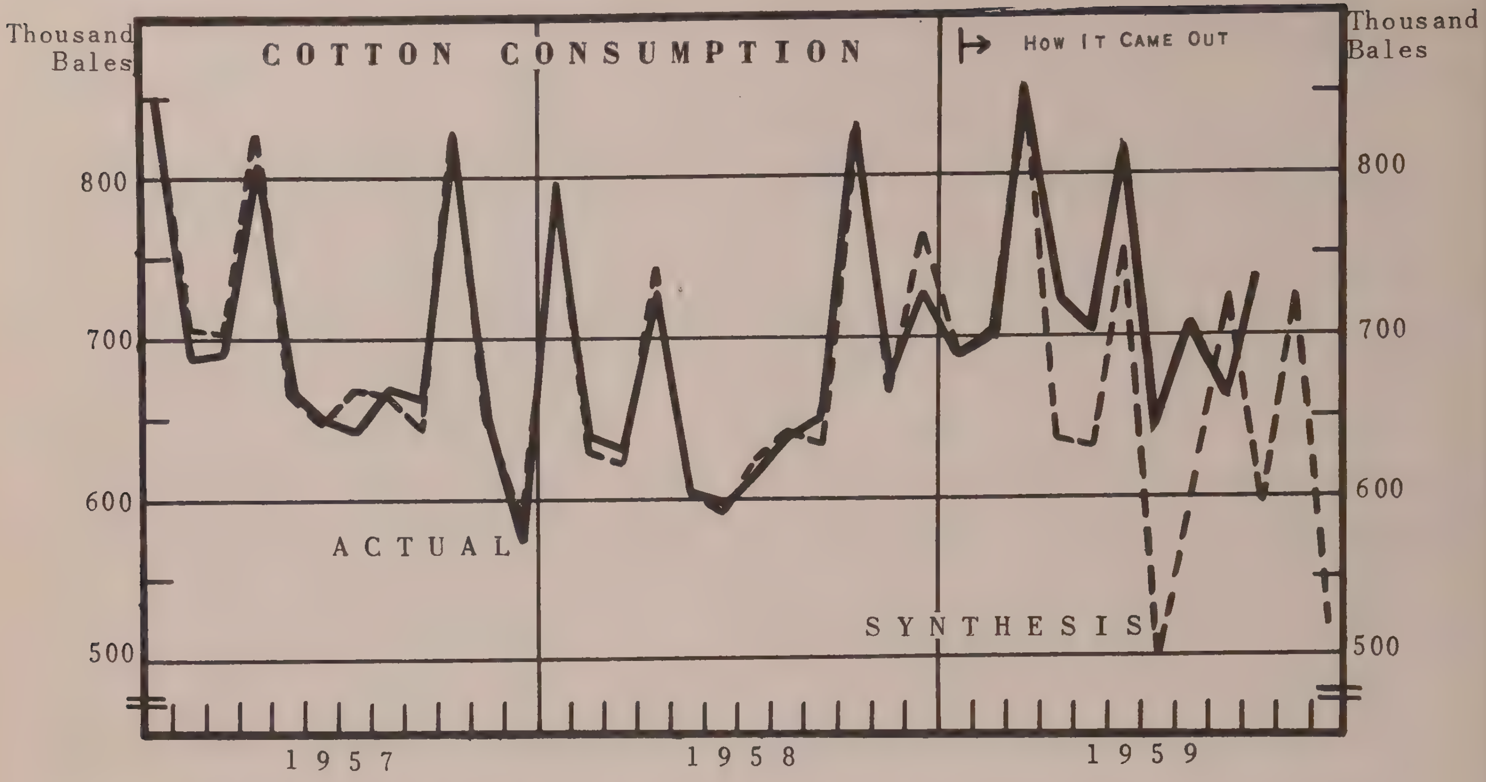
The combination includes the 10.83-year cycle discussed in August and is thus a slight revision of the previous combination.

The difference between this chart and the previous version is minor, however.



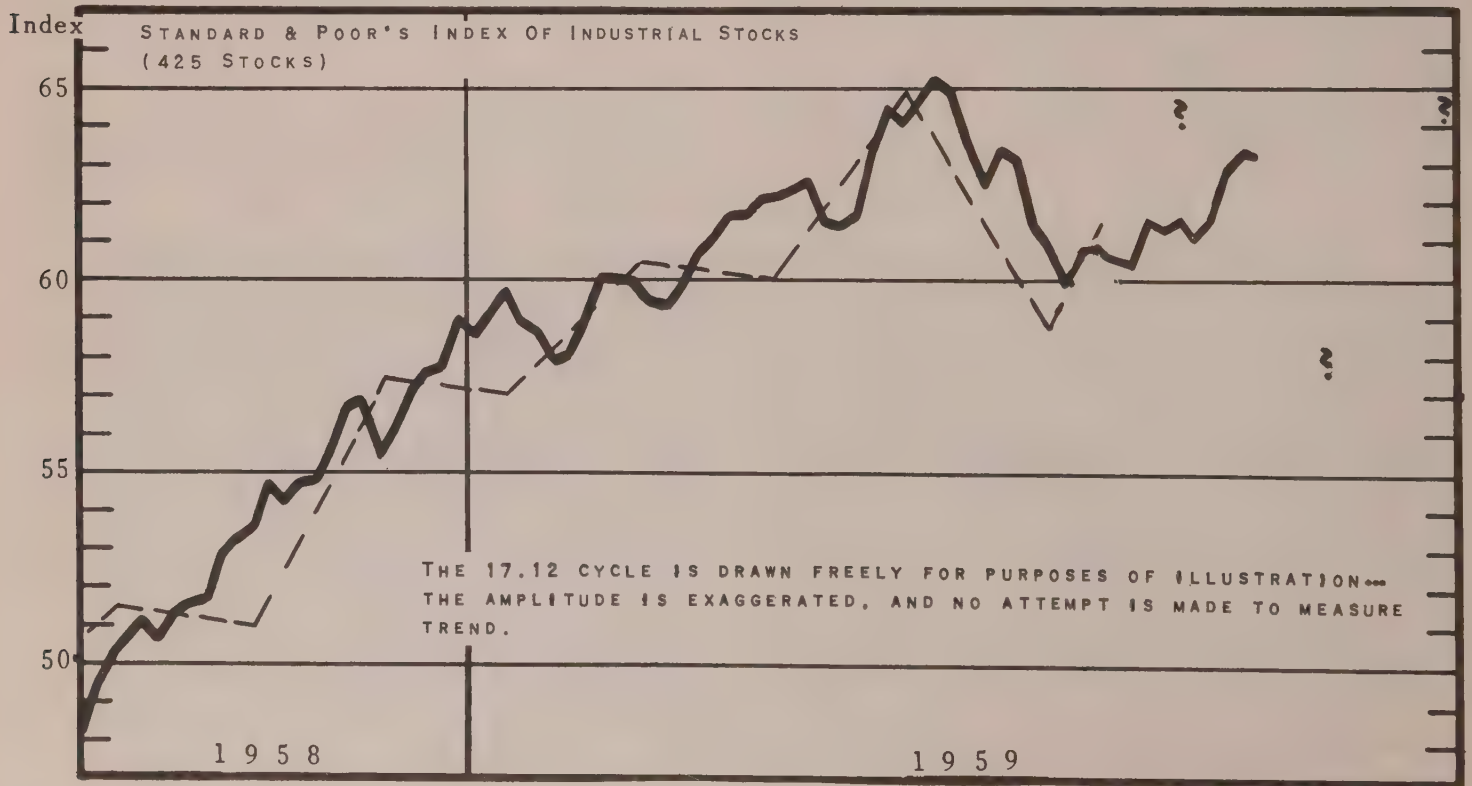
COTTON CONSUMPTION

Cotton consumption during the month of October 1959 totaled 732 thousand bales.



INDUSTRIAL STOCK PRICE INDEX

The last weekly Standard & Poor's Industrial Stock Price Index plotted below was 63.44 for the week of December 16.



THE 17.12 CYCLE IS DRAWN FREELY FOR PURPOSES OF ILLUSTRATION— THE AMPLITUDE IS EXAGGERATED, AND NO ATTEMPT IS MADE TO MEASURE TREND.

OATS PRICES

Over a short term period of two or three years, the price of oats is dominated by two cycles; the 12-month or seasonal cycle, and the 26.64-month cycle. We reported on these two cycles in the September 1958 issue of *Cycles*, and have occasionally reviewed the current picture in the Round-Up.

In the original story the two cycles were combined with an underlying trend line to get the synthesis line with which we have been comparing the actual behavior of oats prices.

It now appears that the underlying trend line needs to be revised to take into account the actual price developments since July 1958 (when the original work was done). This has been done, and the revised trend is included in the synthesis line on the chart below.

The two cycles which are combined with the trend are the same ones as were used in 1958. No changes have been made in the cycles.

A change is apparent in the synthesis line, however. The general level of the line in 1959 has been raised because the underlying trend was raised. The contour of the line is unchanged however, because the cycles in it are not changed.

(The process by which a trend line is revised for a study of this nature is reviewed in an article on egg prices on pages 236 and 237 in the October 1959 issue of *Cycles*.)

The 12-month cycle normally has a low in August of each year and a high in January. It is easy to pick these highs and lows out on the chart below. Actual behavior does not precisely match "normal" expectations on any occasion, but the seasonal cycle in this agricultural series is fairly dependable

The seasonal cycle, showing the month as a percentage of the yearly trend, follows:

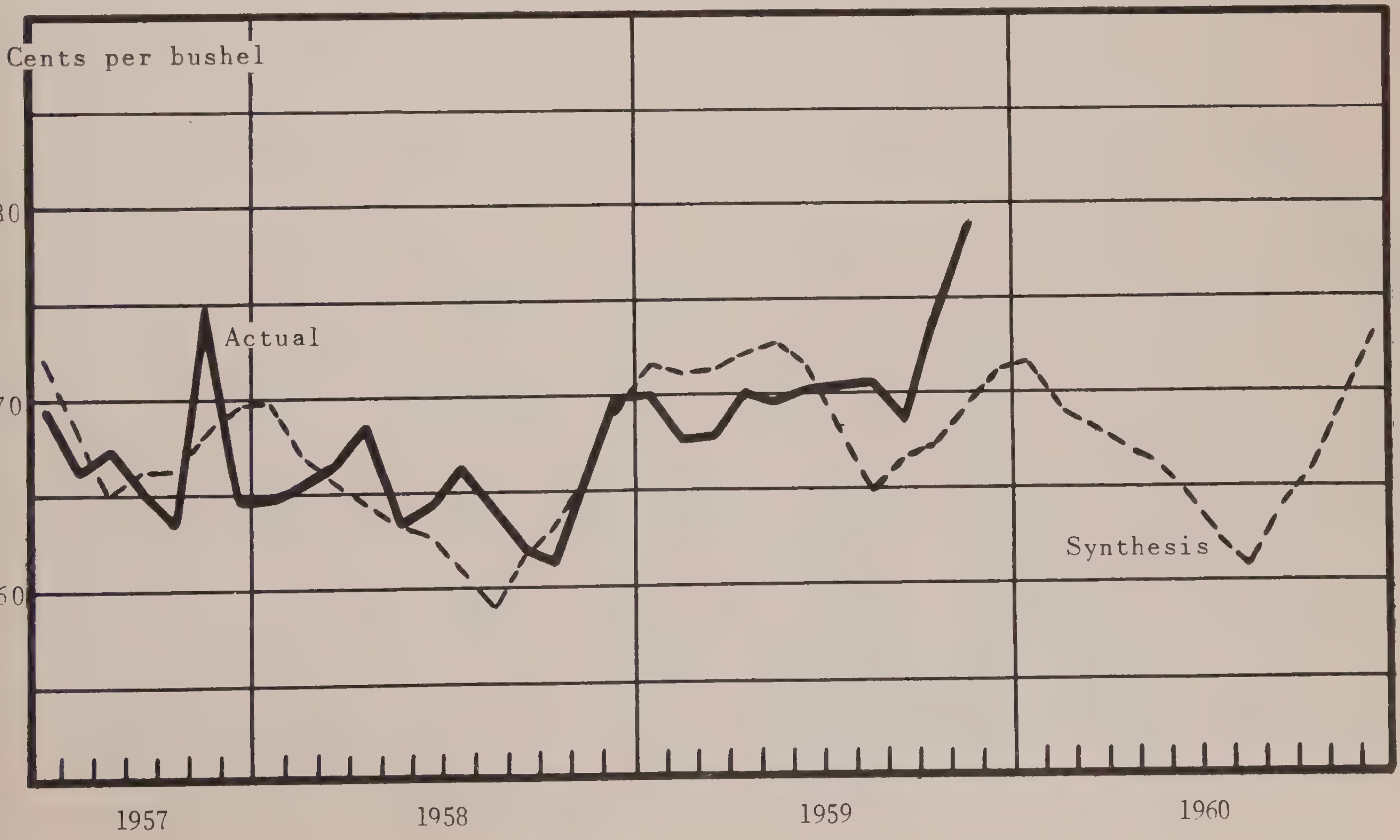
Jan	106.2%	Jul	95.7%
Feb	103.5	Aug	92.0
Mar	102.6	Sep	95.3
Apr	102.3	Oct	96.8
May	101.6	Nov	100.9
Jun	99.5	Dec	104.5

The 26.64-month cycle had an ideal top at May, 1959. The next low is due at June 1960, on the average.

This cycle has been operating in these figures most of the time since 1924 when the price record starts. There have been 16 repetitions, and it seems reasonable to conclude that the cycle is more likely to continue than not to continue.

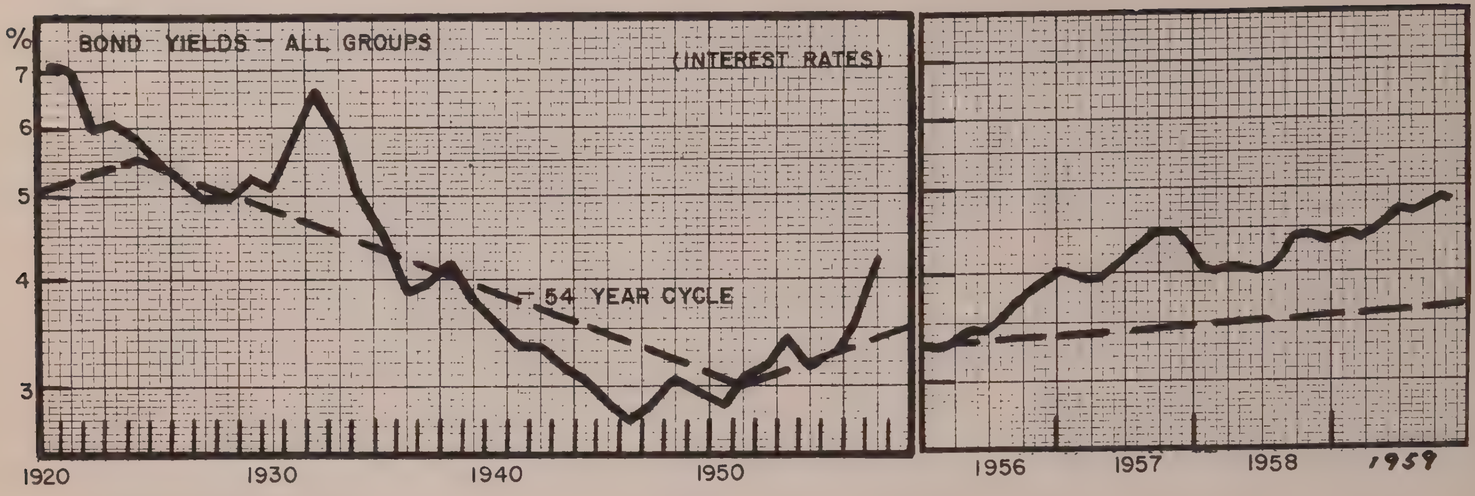
A comparison of the actual price of oats with the synthesis of the two cycles and the underlying trend follows. The synthesis figures used are both before and after the change in the trend that is being made at this time. The figures are the average yearly price of oats in cents per bushel.

		Calculated Price	
	Actual Price	Previous Synthesis (Jul 1958)	Current Synthesis (Dec 1959)
1957	71.3	70.6	71.4
1958	65.1	63.2	64.5
1959	70.0*	65.9	69.8
1960	?	——	66.9



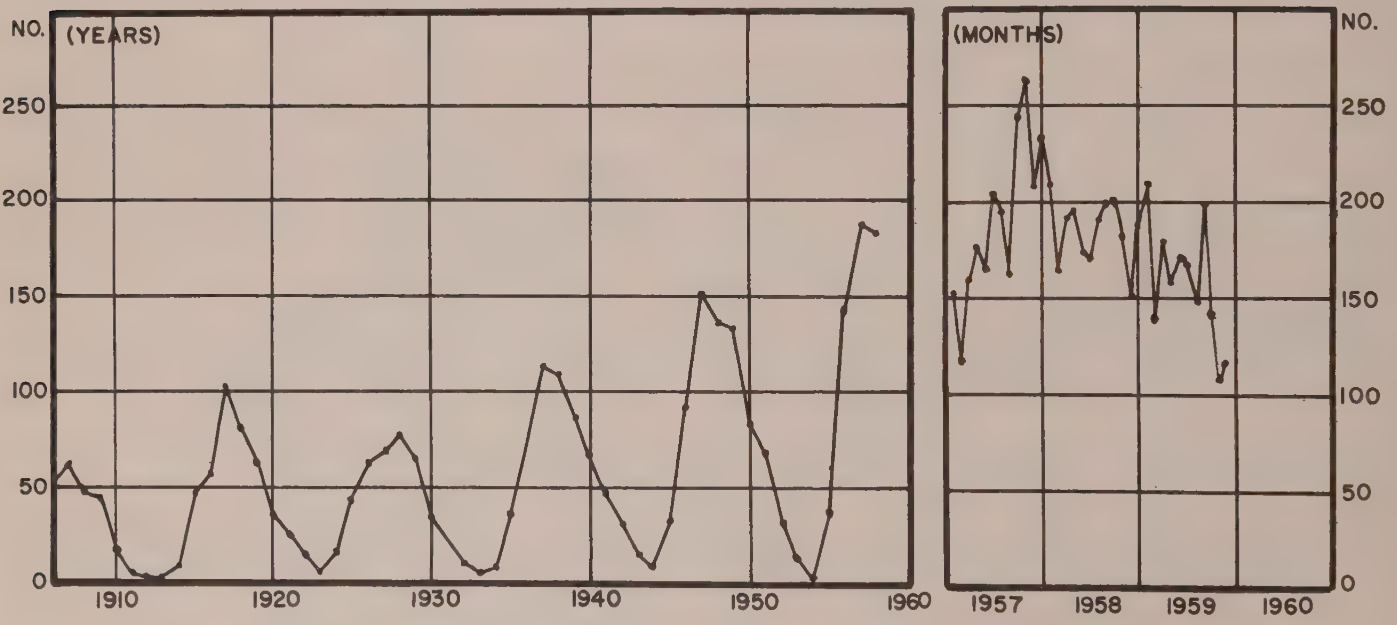
BOND YIELDS

The average yield of all domestic corporate bonds averaged 4.85% during the month of November. This figure is prepared and published by Moody's.



SUNSPOT NUMBERS

Zurich Provisional Sunspot Numbers during the month of November, 1959, averaged 114.



Zurich Provisional Sunspot Numbers

The Geisinger Indicator

FORECAST

The recent drop in industrial production was halted in November when the Federal Reserve Board's seasonally adjusted Index of Industrial Production stood at 148, up one point from the revised figure for October.

The Geisinger Indicator continued to drop, however. It went down to 1.2 for August (April 1960 when advanced). This was the third straight month of decline for this Indicator.

On the other hand, the drop in the First Difference Indicator has stopped, and the value for October was -1.16, which is up from the previous month's figure of -2.00.

The Modified Geisinger Indicator, which is the sum of the Geisinger Indicator and the First Difference Indicator, also continued to decline in August (April 1960 when advanced). It went down from 2.63 to -0.47.

Ordinarily the Geisinger Indicator sees below the surface of things and thus tells us what is *going* to happen. If the Indicator had not been distorted by the steel strike, a decline as severe as the present one would be alarming. But the Indicator *has* been distorted. How much of its decline is due to possible underlying weakness, not otherwise visible, and how much to the strike, no one can tell.

In view of the distortions in the Indicator caused by the strike, the decline of the Indicator may be a false alarm. But it is not necessarily a false alarm. Let us, therefore, continue to consider it as a note of caution—like a storm on the horizon that may blow around, but which may not, and therefore which needs to be watched.

December 23, 1959 E. R. Dewey

Month	F.R.B. Index	Geisinger Indicator	First Difference Indicator	Modified Geisinger Indicator	Timing Advanced 8 Months
Jun-1959	155	4.0	1.83	5.83	1960-Feb
Jul	153	2.8	-0.17	2.63	Mar
Aug	149	1.2	-1.67	-0.47	Apr
Sep	149	*	-2.00r	*	May
Oct	147r	*	-1.16p	*	Jun
Nov	148p	*	*	*	Jul

p - preliminary r - revised * - not yet available

BACKGROUND

The Modified Geisinger Indicator is a series of numbers which, in the past, have gone up and down ahead of corresponding movements of the Federal Reserve Board Index of Industrial Production. The Modified Geisinger Indicator thus throws some light on the probabilities of the future.

The F. R. B. Index of Industrial Production measures physical production in the U. S. A. It is a weighted average of tons, yards; gallons, and numbers of things produced each month.

The Modified Geisinger Indicator is the sum of two Indicators, the Geisinger Indicator and a First Difference Indicator.

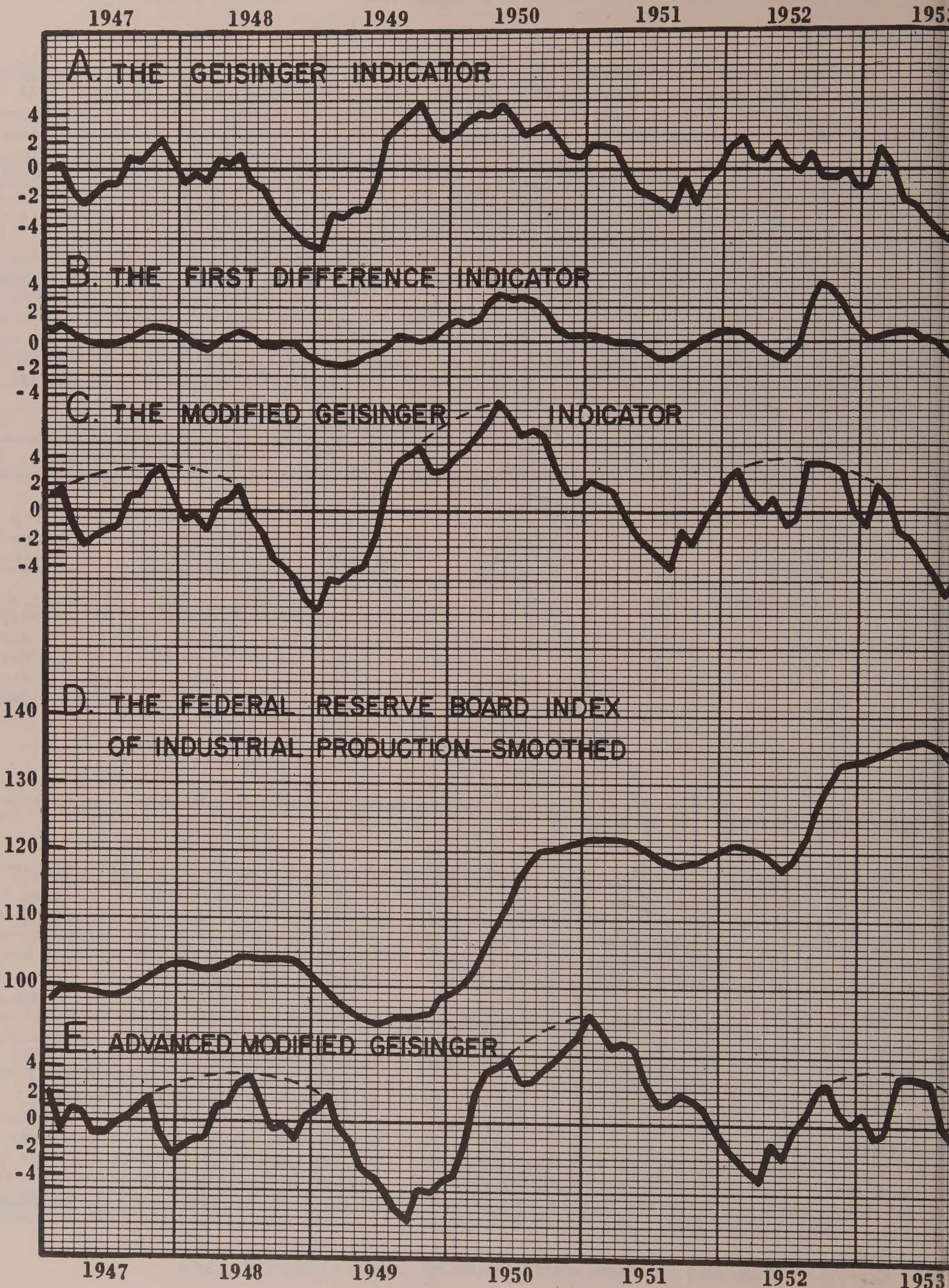
The Geisinger Indicator was invented by Robert Geisinger. It is derived from figures which are published each month in the *Survey of Current Business*. It is charted for you as Curve A on pages 46 and 47.

Curve B on these same two pages charts the First Difference Indicator, which is merely the amount by which the smoothed F. R. B. Index is above or below the value for the preceding month. The smoothing is effected by means of a centered 3-month moving average and a 2-month moving average posted to the second position.

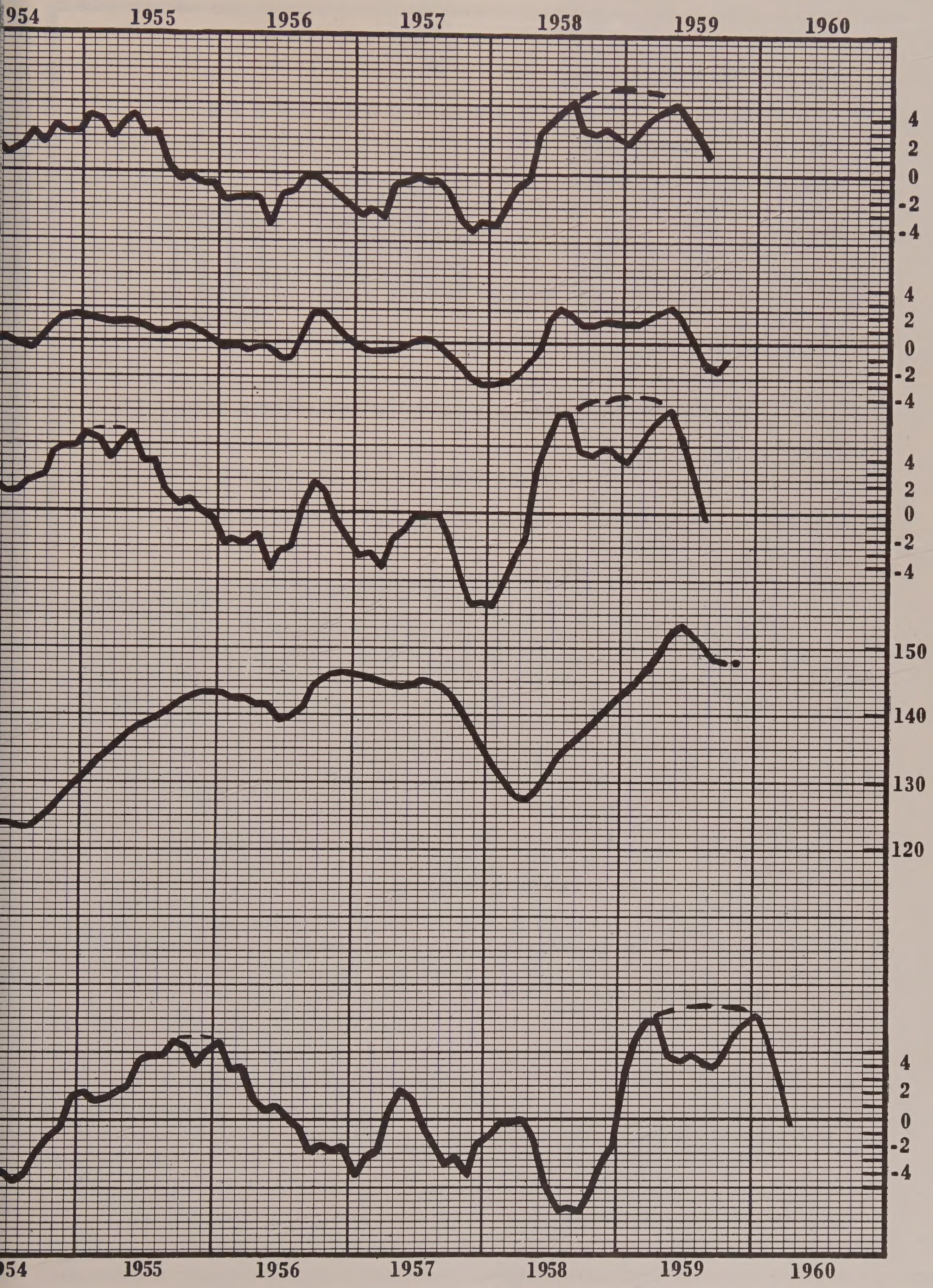
Curve C charts the sum of the values of Curves A and B. This curve is called the Modified Geisinger Indicator. It suggests in a general way what the F. R. B. Index may do some eight months later.

Curve D charts the values of the F. R. B. Index of Industrial Production smoothed.

Curve E re-charts Curve C, advancing it by 8 months. This advance is for two reasons (1) so that you can more easily compare the past behavior of the Modified Geisinger Indicator with the behavior of the F. R. B. Index, and (2) so that you can have a better idea of what the F. R. B. Index may do in the future.


1947
1948
1949
1950
1951
1952
1953
A. THE GEISINGER INDICATOR
4
2
0
-2
-4
B. THE FIRST DIFFERENCE INDICATOR
4
2
0
-2
-4
C. THE MODIFIED GEISINGER INDICATOR
4
2
0
-2
-4
D. THE FEDERAL RESERVE BOARD INDEX OF INDUSTRIAL PRODUCTION—SMOOTHED
140
130
120
110
100
E. ADVANCED MODIFIED GEISINGER
4
2
0
-2
-4
1947
1948
1949
1950
1951
1952
1953

OF INDUSTRIAL PRODUCTION



Please turn to page 45 for the Forecast

H A MUSHAM
741 N RUSH ST
CHICAGO, ILL

DIRECTOR'S LETTER -- CONTINUED

Dear Member:

You will find that many of the old issues of CYCLES are as good or better than the ones you are receiving currently.

Many of the old issues are becoming collector's items.

In fact we have only one complete set of Volume I (1950, 5 issues), and Volume 3 (1952, 10 issues). These sets are priced at $15 a set (bound, $4 extra).

We have several complete sets of all the other years. They sell for $5.50 per set (bound, $9.50).

If you will accept substitutions for the one or two issues of each year that are scarce, you may have the back reports for 1951 through 1958 at $3.50 per set of 10 (or 11 or 12 for the later years). How is that for a bargain?

Send your order and check to the Foundation for the Study of Cycles, 680 West End Avenue, New York 25, New York.

Very cordially yours,

Edward R. Dewey

Director